



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,138	09/23/2003	Indukumar G. Shah	MCP-5013	7577

27777 7590 11/26/2010  
PHILIP S. JOHNSON  
JOHNSON & JOHNSON  
ONE JOHNSON & JOHNSON PLAZA  
NEW BRUNSWICK, NJ 08933-7003

EXAMINER
----------

QAZI, SABIHA NAIM

ART UNIT	PAPER NUMBER
----------	--------------

1628

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

11/26/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jnjuspatent@corus.jnj.com  
lhowd@its.jnj.com  
gsanche@its.jnj.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/671,138	<b>Applicant(s)</b> SHAH ET AL.	
	<b>Examiner</b> Sabiha Qazi	<b>Art Unit</b> 1628	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 8/27/10.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-14 is/are pending in the application.
- 4a) Of the above claim(s) 8-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Application/Control Number:  
10/671,138  
Art Unit: 1628

Page 2

**Non-Final Office Action**

Claims 1-6 and 8-14 are pending. No claim is allowed. Amendments are entered.

**Summary of this Office Action dated October 27, 2010**

1. 35 USC § 103(a) Obviousness Rejection
2. Response to Remarks
3. Data in the specification
4. Communication

Application/Control Number:  
10/671,138  
Art Unit: 1628

Page 3

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be *obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patent ability shall not be negated by the manner in which the invention was made.*

This application currently names joint inventors. In considering patent ability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35

Application/Control Number:

10/671,138

Page 4

Art Unit: 1628

U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-6 and 14 are rejected under 35 U.S.C. 103(a) as obvious over SUNSHINE (US Patent 4,486,436), TENCZA et al. (US Patent 4,943,565), Remington's Pharmaceutical Sciences Page 1837, SCHROEDER et al. (US Patent 6,602,520) and JAIN et al. (WO 01/87264).

### **Applicant Claims**

A solid pharmaceutical dosage form comprising caffeine, a disintegrant selected from the group consisting of sodium starch glycolate,

Application/Control Number:

10/671,138

Page 5

Art Unit: 1628

crosslinked carboxymethylcellulose, and mixtures thereof, and a cephalagic, wherein said caffeine is in the form of uncoated ungranulated particles having a granular morphology and an average particle size of about 70 to 600 microns, and wherein at least 86 % of said caffeine dissolves within 5 minutes, when measured by USP, Type II Apparatus (Paddles) set at 50 rpm.

**Determining the scope and contents of the prior art (MPEP 2141.01)**

SUNSHINE (US Patent 4,486,436) teaches analgesics and anti-inflammatory compositions comprising caffeine (3,7-dihydro-1,3,7-trimethyl-1H-purine-2,6-dione) and novel analgesic and anti-inflammatory compositions for use in eliciting an analgesic or anti-inflammatory response, said compositions comprising caffeine together with a selected non-narcotic analgesic/non steroidal anti-inflammatory drug or a selected narcotic analgesic, or both. When used in combination with the selected drugs, **caffeine enhances** the analgesic or anti-inflammatory response and also hastens its onset (see the abstract). The reference teaches a composition of selected non-narcotic analgesics/non steroidal anti-inflammatory drugs, which differ substantially in chemical structure from aspirin, phenacetin and acetaminophen, and which have significantly different biological profiles therefrom, can be advantageously formulated into novel pharmaceutical

Application/Control Number:

10/671,138

Page 6

Art Unit: 1628

compositions together with **caffeine** and administered to mammals, especially humans, to not only elicit a more potent analgesic or anti-inflammatory response but also to evoke such response more rapidly than possible by administration of the analgesic or anti-inflammatory agent alone. See lines 44-55 in column 6. Suitable disintegrators can include, without limitation, starch, methylcellulose, agar, bentonite, cellulose, wood products, alginic acid, guar gum, citris pulp, carboxymethylcellulose and sodium lauryl sulfate. See lines 34-60 in column 21. See the entire document especially lines 1-36 in column 5, lines 24-32 in column 6, examples and claims.

TENCZA et al. teaches tablets containing, in combination, aspirin, acetaminophen and caffeine having improved dissolution rates. The combination of aspirin, acetaminophen and caffeine is popular in analgesic preparations and finds widespread use, particularly in over-the-counter (O.T.C) products. Moreover, a widely used dosage form for delivering this combination drug is tablet. Since these products are also likely to be subjected to elevated temperatures while in storage in warehouses and in homes, it has become customary in course of manufacturing such tablets to store them at elevated temperatures for extended periods of time to test their

stability and the in-vitro availability of the active ingredients; i.e., **aspirin, acetaminophen and caffeine** for pharmaceutical action. One method for measuring the latter has been to measure the dissolution rates of the tablets. If the tablets meet a certain standard for dissolution rate, the active ingredients should be available for absorption into the blood stream within an acceptable period of time after ingestion.

The dissolution rates of tablets containing aspirin, acetaminophen and caffeine can be improved by incorporating a low-substituted hydroxypropylcellulose in sufficient amount to serve as a secondary disintegrant. See the entire document especially abstract, lines 5-40 in column 3, examples and claims.

Remington's Pharmaceutical Sciences reference teaches clearly teaches that disintegrants is a substance or a mixture of substances, added to a tablet to **facilitate its breakup or disintegration after administration.** It teaches materials serving as disintegrating agents which include cellulose and crosslinked polymers. It teaches **sodium starch glycolate as disintegrant.**

It further teaches that factors other than the presence of disintegrants can effect significantly the disintegration time of compressed tablets. The binder, tablet hardness and the lubricant have been shown to influence the disintegrate time.



SCHROEDER et al. teaches rapidly disintegrating preparations containing at least one active pharmaceutical ingredient and at least one excipient can be obtained. It teaches ibuprofen, caffeine and disintegrating agent carboxymethylcellulose. See the entire document especially abstract, line 20-30 in column 3, line 1 in column 4, lines 3-13 in column 5.

JAIN et al. teaches a rapidly disintegrating solid oral dosage form of a poorly active ingredient particles have an average diameter, prior to inclusion in the dosage form, of less than about 2000 nm. The dosage form of the invention has the advantage of combining rapid dissolution if the active. See the entire document especially abstract, section A on page 6, page 7, and 8. section c. on page 11, section 4 on page 13, section B on page 14. section C. on page 17. tables and claims.

**Ascertaining the differences between the prior art and the claims at issue (MPEP 2141.012)**

Presently claimed invention differs in claiming specific solubility.

**Finding of Prima Facie Obviousness, Rational and Motivation obviousness or nonobviousness (MPEP 2142-2143)**

It would have been obvious to one skilled in the art at the time the invention was made to prepare additional beneficial solid pharmaceutical compositions having good dissolution rate and synergism containing active and useful drugs in combination **with caffeine and a disintegrant** because prior art teaches that by the addition of caffeine synergistic results are obtained and second disintegrant is added to improve the dissolution rate. Motivation has been provided by both the references cited above because disintegrant carboxymethylcellulose is taught by SUNSHINE. Furthermore, Remington's Pharmaceutical Sciences clearly teaches that disintegrants is a substance or a mixture of substances, added to a tablet to facilitate its breakup or disintegration after administration. It teaches materials serving as disintegrating agents which include cellulose and crosslinked polymers. It teaches sodium starch glycolate as disintegrant. It further teaches that factors other than the presence of disintegrants can effect significantly the disintegration time of compressed tablets. The binder, tablet hardness and the lubricant have been shown to influence the disintegrate time. CHROEDER teaches the preparation of rapidly disintegrating tablets containing at least one active pharmaceutical ingredient and at least one excipient can be obtained. It teaches ibuprofen, caffeine and disintegrating agent carboxymethylcellulose. JAIN teaches the particle size composition of poorly soluble drugs.

There has been ample motivation to prepare the composition of caffeine with rapid disintegration containing various particle sizes, and disintegrant sodium starch glycolate. of rapid disintegrating tablets by using the same ingredients and teaches all the factors which influence the disintegration so at the time the invention was filed it would have been obvious to prepare such tablets.

**Data in the specification**

The specification discloses that “The surfaces of the caffeine particles according to the invention are substantially free, preferably free, of polymeric binders and coating materials. One commercially available form of such caffeine may be obtained from BASF under the designation anhydrous caffeine granular, 0.2/0.5. The dosage form is solid. In one embodiment, the dosage form is a compressed tablet or caplet. The dosage form may also be uncoated or coated with conventional coating materials”, (see lines 3-8 on page 3 of the specification).

It appears that the caffeine particles are said to be “substantially free” of polymeric binders coating materials. **Substantially free** is not defined. It may contain some coating. In the example disclosed in present specification there is no ungranulated and uncoated caffeine used. No criticality and/or unexpected results are noted.

In the light of the forgoing discussion, the Examiner’s ultimate legal conclusion is that the subject matter defined by the instant claims would have been obvious within the meaning of 35 U.S.C. 103(a).

**Response to Arguments**

Applicants' arguments filed on 8/27/10 are hereby acknowledged.

Applicant's arguments were fully considered but are not found persuasive therefore all the rejections are maintained. It is noted that Tencza et al. have adapted a dissolution rate such that at least 75% of the caffeine- acetaminophen tablet dissolves in under 45 minutes (page 21). Applicant argues that Tenzca et al. (CA 1,336,687) does not teach the presently claimed invention. First of all Examiner would like to draw the attention that caffeine particles are said to be "substantially free" of polymeric binders coating materials. Substantially free is not defined. The caffeine used by Applicants is not uncoated it is "substantially free". It is not known what substantially free means. Examiner respectfully disagrees because with the arguments because the references teaches caffeine and acetaminophen tablet compositions (abstract). The caffeine is uncoated and granular with a particle size between 20 mesh to 100 mesh (pages 11 and 23). The caffeine and acetaminophen tablet also comprises a disintegrant, such as crospovidone XL-20 (see page 9; and page 15, example 1). It is noted that crospovidone is well known in the pharmaceutical arts as crosslinked polyvinylpyrrolidone. The tablet is made via compression (page 23). **The**

Application/Control Number:  
10/671,138  
Art Unit: 1628

Page 12

**acetaminophen is granular** (page 23). Applicant is using the **same amount of caffeine as used by all the cited references**. Rejection over SUNSHINE et al. '436 is maintained for the same reasons as set forth in the previous office action and for the reason cited above for other rejections. A new reference Jain et al is included for the particle size of the poorly soluble drugs with rapid disintegration. Claimed invention as amended is still considered obvious over the prior art and is inherently taught by the prior art of record.

#### **COMMUNICATION**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sabiha Qazi whose telephone number is (571) 272-0622. The examiner can normally be reached on any business day except Wednesday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fetterolf Brandon can be reached on (571) 272-2919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:  
10/671,138  
Art Unit: 1628

Page 13

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sabiha Qazi/  
Primary Examiner, Art Unit 1612